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MDA970A1 thru MDA970A6

Designers Data Sheet

INTEGRAL DIODE ASSEMBLIES

... diffused silicon dice interconnected and transfer molded into rectifier circuit assemblies for use in application where high output current/size ratio is of prime importance. These devices feature:

- Void-free, Transfer-molded Encapsulation to Assure High Resistance to Shock, Vibration, and Temperature Extremes
- High Dielectric Strength
- Simple, Compact Structure for Trouble-free Performance
- High Surge Capability — 100 Amps

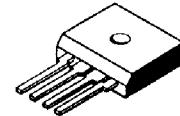
Designers Data for "Worst Case" Conditions

The Designers Data Sheet permits the design of most circuits entirely from the information presented. Limit curves — representing boundaries on device characteristics — are given to facilitate "worst case" design.



SINGLE-PHASE FULL-WAVE BRIDGE

4 AMPERES
50-600 VOLTS



MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Rating	Symbol	MDA970A1	MDA970A2	MDA970A3	MDA970A5	MDA970A6	Unit
Peak Repetitive Reverse Voltage	V _{RRM}						
Working Peak Reverse Voltage	V _{RWM}	50	100	200	400	600	Volts
DC Blocking Voltage	V _R						
RMS Reverse Voltage	V _R (RMS)	35	70	140	280	420	Volts
DC Output Voltage							
Resistive Load	V _{dc}	31	62	124	248	372	Volts
Capacitive Load	V _{dc}	50	100	200	400	600	Volts
Average Rectified Forward Current	I _O						Amp
T _A = 25°C				4.0			
T _C = 55°C				8.0			
Nonrepetitive Peak Surge Current (surge applied at rated load conditions, T _J = 150°C)	I _{FSM}			100			Amp
Operating and Storage Junction Temperature Range	T _J , T _{stg}			-65 to +150			°C

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max (Per Die)	Unit
Thermal Resistance, Junction to Case	Each Die	R _{θJC}	10 °C/W
	Effective Bridge	R _{θ(EFF)}	7.75 °C/W

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Max	Unit
Instantaneous Forward Voltage (Per Diode)	V _F	—	1.1	Vdc
(I _F = 6.28 Amp, T _J = 25°C)		—	1.0	
(I _F = 6.28 Amp, T _J = 150°C)		—	—	
Reverse Current (Rated VRM applied to ac terminals, + and - terminals open, T _A = 25°C)	I _R	—	1.0	mA

CASE: Transfer-molded plastic encapsulation.

FINISH: All external surfaces are corrosion-resistant. Leads are readily solderable.

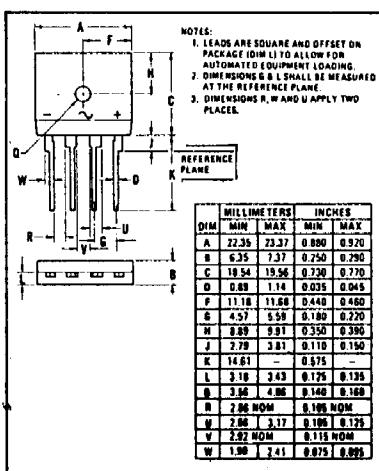
POLARITY: Embossed symbols

AC input = ~ DC output = + DC output = -

MOUNTING POSITION: Any

WEIGHT (Approximately): 7.5 Grams

MOUNTING TORQUE: 5 in.-lb. Max



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